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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,170	04/09/2001	A. L. Hagedoorn	IO-1027-US	8264
24923	7590	10/09/2003	EXAMINER	
PAUL S MADAN MADAN, MOSSMAN & SRIRAM, PC 2603 AUGUSTA, SUITE 700 HOUSTON, TX 77057-1130			LOBO, IAN J	
			ART UNIT	PAPER NUMBER
			3662	

DATE MAILED: 10/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,170

Applicant(s)

HAGEDOORN ET AL.

Examiner

Ian J. Lobo

Art Unit

3662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 31 and 46 are rejected under 35 U.S.C. 102(b) as being anticipated by the patent to Butler ('275).

Butler (see Fig. 2) discloses a geophone housing (10) where a first terminal (48) is positioned on a first end of the housing and a second terminal (46) is positioned on a second end.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 18, 19, 44, 45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over either of the patent to Marschall et al ('562).

Marschall discloses (col. 1, line 64 – col. 2, line 1) treating, with a non-conductive coating, an electrical surface of at least one electrical component to render the surface electrically non-conductive. It is noted that although the electrically insulating method suggested is for a hydrophone, it would have been obvious to one of ordinary skill in the art to utilize the

same procedure upon a geophone since both a geophone and hydrophone are forms of acoustic detectors.

5. Claims 1-17 and 20-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall, Jr. ('464) or McNeel ('692) when taken in view of Butler ('275).

The patents to Hall, Jr. and McNeel each disclose a geophone with a housing, an electrically conductive terminal, a magnet and a coil resiliently mounted within the housing. The geophone further includes a housing and a first and second terminal located on a first (same) end.

The difference between independent claim 31 and the McNeel and Hall, Jr. structures is the claim specifies that the first terminal is located on a first end and the second terminal is located on a second end. Independent claims 1, 11, 17 and 20 similarly differ over McNeel and Hall, Jr. in the "double sided" embodiment as opposed to the single sided embodiment of McNeel or Hall, Jr.

Butler teaches a directional transducer where first and second terminals are located on opposite sides or ends of the transducer housing. By configuring the transducer to include first and second terminals on opposite ends of the housing, Butler teaches that directional signals incident on the transducer from the axial direction are enforced and those signals incident upon the transducer from the perpendicular direction are suppressed.

Thus, in view of Butler's teaching of enhancing and suppressing directional signals, it would be obvious to one of ordinary skill in the art to modify either McNeel or Hall, Jr. to an arrangement where the terminals are located on either and opposite ends of the housing so as to

enhance the directional capabilities of the geophones of McNeel or Hall, Jr. Claims 1, 11, 17, 20 and 31 are so rejected.

Dependent claims 2-10, 12-16, 21-30 and 32-43 are specific to the geophone structure and are shown by the Hall, Jr. and McNeel patents.

Response to Arguments

6. Applicant's arguments with respect to claims 1-47 have been considered but are moot in view of the new ground(s) of rejection.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian J. Lobo whose telephone number is (703) 306-4161. The examiner can normally be reached on Monday - Friday, 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (703) 306-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-4180.


IAN J. LOBO
PRIMARY EXAMINER